

Year 9 Computer Science Curriculum Summary

Term	Unit	Threshold concepts/Core knowledge	Formative (interim) assessment & Homework	Formal assessment
1	Unit 1: Can Computing save the planet?	<p>As the use of the internet has grown, so has the network on which it runs. This includes the need for more data centres and servers which hold the music, videos and images that we want to view on demand. Whilst this is good for us, is it good for the environment?</p> <p>This unit of work focuses on the impact technology is having upon today's society. Students will investigate the positive and negative impacts technology has upon our world, and then go on to create a campaign to be used as part of raising awareness of World Earth Day 2024.</p>	<p><u>Literacy Homework</u> Key word spelling test revision issued every 5 weeks</p> <p><u>Interim</u> Key word spelling test and extended writing task every 6 weeks.</p> <p>Do Now, Key Vocabulary and extended writing booklet</p> <p>End of unit 1 interim practical assessment</p>	
2	Unit 2: Advanced Python programming	<p>This unit introduces learners to how data can be represented and processed in sequences, such as lists and strings. Students will learn a spectrum of operations on sequences of data, that range from accessing an individual element to manipulating the entire sequence.</p> <p>For each of the programming tasks students will look at a selection of problems linked to our solar system, book texts, capital cities, leaked passwords, word dictionaries, and ECG data.</p>	<p><u>Literacy Homework</u> Key word spelling test revision issued every 5 weeks.</p> <p>Home Learning project 1</p> <p><u>Interim</u> Key word spelling test and extended writing task every 6 weeks. Do Now, Key Vocabulary and extended writing booklet</p>	Assessment 1: <i>"Python programming"</i> formal assessment
3	Unit 3: We mean Business!	<p>This unit introduces students the basic concepts of business studies and enterprise. Students will learn about what makes a business successful, what is an entrepreneur and the qualities they possess to make them a</p>	<p><u>Literacy Homework</u> Key word spelling test revision issued every 5 weeks</p> <p><u>Interim</u> Key word spelling test and</p>	

		<p>success.</p> <p>Students will work in teams to come up with their own business idea, learn how to market this business and understand how a business is financed.</p>	<p>extended writing task every 6 weeks.</p> <p>Do Now, Key Vocabulary and extended writing booklet</p> <p>End of unit 3 interim practical assessment</p>	
4	Unit 4: Representations-going audio-visual	<p>In this unit, learners will focus on making digital media such as images and sounds, and discover how media is stored as binary code.</p> <p>Students will draw on familiar examples of composing images out of individual elements, mix elementary colours to produce new ones, take samples of analogue signals to illustrate these ideas, and then bring all these things together to form one coherent narrative. Students will use the sound editing software, Audacity to manipulate sounds and create their own digital audio product.</p>	<p><u>Literacy Homework</u> Key word spelling test revision issued every 5 weeks</p> <p>Home Learning project 2</p> <p><u>Interim</u> Key word spelling test and extended writing task every 6 weeks.</p> <p>Do Now, Key Vocabulary and extended writing booklet</p>	<p><u>Assessment 2:</u> <i>"Representations formal assessment"</i></p>
5	Unit 5: Introduction of Cybersecurity	<p>This unit takes students on an eye-opening journey of discovery about techniques used by cybercriminals to steal data, disrupt systems, and infiltrate networks.</p> <p>Students will start by considering the value of their data to organisations and what they might use it for. They will then look at social engineering techniques used by cybercriminals to try to trick users into giving away their personal data.</p> <p>The unit will look at the more common cybercrimes such as hacking, DDoS attacks, and malware, as well as looking at methods to protect ourselves and our networks against these attacks.</p>	<p><u>Literacy Homework</u> Key word spelling test revision issued every 5 weeks</p> <p><u>Interim</u> Key word spelling test and extended writing task every 6 weeks.</p> <p>Do Now, Key Vocabulary and extended writing booklet</p> <p>Alan Turing Hacking challenge 2024</p>	
6	Unit 6: My digital	Films, television, computer games,	<u>Literacy Homework</u>	

	world- Animations	<p>advertising, and architecture have been revolutionised by computer-based 3D modelling and animation.</p> <p>Students will discover how professionals create 3D animations using the industry-standard software package, Blender.</p>	<p>Key word spelling test revision issued every 5 weeks</p> <p><u>Interim</u> Key word spelling test and extended writing task every 6 weeks.</p> <p>Do Now, Key Vocabulary and extended writing booklet</p>	
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